

EPA Feedback	CRC Response
Please provide separate stand-alone versions of the description of well operations in Attachment A for Well 373-35R and each of the three planned injection wells that describe operating conditions that are specific to the construction/perforation depths in each well. The attachments should include the following: injection well operating conditions (e.g., a tabular description of surface and bottomhole maximum injection pressures, annulus pressure, annulus pressure/tubing differential, and the maximum CO2 injection rate); how the maximum injection pressure was determined; a description of routine shutdown procedures; and tables summarizing reporting of well and project-related monitoring.	Stand-alone versions provided.
Attachment E (the PISC and Site Closure Plan), page 1 states that the Monterey Formation 26R reservoir will be operated such that the pressure will not exceed the initial pressure at the time of discovery. Please clarify that injection limits (e.g., pressures) will be based on the fracture pressure of the Monterey Formation 26R injection zone (i.e., at the tops of the perforations).	Complete
Please provide the fracture pressure (psi) at the top of the perforations in injection well 373-35R within the Monterey Formation (and not the base of the Reef Ridge Shale) and confirm the proposed maximum injection pressure does not exceed 90% of this value, per 40 CFR 146.88(a).	The maximum allowable downhole pressure (90% of Fracture pressure) for the injectors have been calculated at the top perforation and updated in Table 6 of the revised Attachment B
Please show the conversion of the average injection rate from million standard cubic feet per day (mmscf/d; Table 8 of the Narrative) to tonnes per day (t/day; Table 5 of the AoR CA). Also, please ensure these values are equal and are consistent throughout the permit application.	The conversion from million standard cubic feet per day to tonnes per day is : $\text{mmscf/d} * (1,000,000 \text{ scfd/mmscf/d}) * (0.0283168 \text{ m}^3/\text{scf}) * (1.87 \text{ kg/m}^3) * (0.001 \text{ tonnes/kg})$ Table 8 in the Narrative document and Table 5 in the AoR document have been updated to be consistent and show the target injection rates for the wells
Please clarify that a 2,984 psi annulus pressure at the packer is the proposed maximum limit and that it corresponds with the maximum injection pressure for Well 373-35R. Additionally, please specify the surface annular pressure range that equates to a 2,984 psi annulus pressure at the packer.	Table updated with surface and downhole (at packer) annular pressures for beginning and end of injection to maintain >100 psi differential between annulus and tubing.
There appears to be a typo resulting in the packer depth being greater than the tubing depth in Table 7 of the AoR CA. Please revise Table 7 to include the correct packer depth.	Updated.
Please include a description of standard operating procedures to ensure that the maximum daily injection rate will not be exceeded.	Covered in the COP submission for each well.
Please update Table 5 or the permit application narrative to reflect the correct planned injection start and end dates.	Updated.
The Massachusetts Institute of Technology's CO2 Thermophysical Calculator is no longer operational. Please revise the methodology by which the CO2 density will be calculated.	Density of CO2 injected into the Monterey Formation A1-A2 will be calculated using PVTP, a fluid thermodynamics package, developed by Petroleum Experts Ltd. PVTP is an industry standard software package that has been used extensively in CO2 EOR applications to accurately model and match CO2 PVT properties over a wide range of temperatures and pressures.
Please describe the procedures for "gradual cessation of injection," i.e., the rate of injection volume reduction over a specified number of days.	Covered in the COP submission for each well.
Please also describe routine well shutdown procedures (e.g., for well workovers), and if these would be the same as the gradual shutdown procedures discussed above.	Covered in the COP submission for each well.
Please include standard operating procedures to support the automated shutdown system.	Covered in the COP submission for each well.
To avoid the need for a permit modification if stimulation were to become necessary in the future, EPA requests that CTV prepare a draft stimulation plan. EPA can provide some additional guidance about the content of the plan, but anticipates that the plan should describe:	Will provide a document.
o The stimulation fluids to be used, including any additives (e.g., corrosion inhibitors, clay inhibitors, biocides, complexing agents, or surfactants) or diverting agents; and	Complete
o Step-by-step procedures that would be employed during stimulation.	Complete